

Figure 4. Bilateral cordon training system for grape vines, year 2. (A) Spring, weak vine after pruning; (B) vigorous vine after pruning; (C) Fall, weak vine; (D) Fall, vigorous vine.

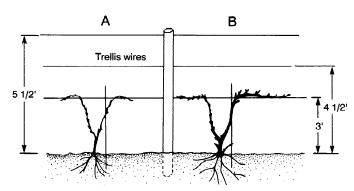


Figure 5. Bilateral cordon training system for grape vines, year 3. (A) Spring, weak vine after pruning; (B) Spring, vigorous vine after pruning.

Cordons may be either unilateral or bilateral; in either case, cordons should ultimately span the distance between two adjacent vines in a row.

High-Trellis Cordon System (for use with American bunch grapes and Muscadine). The initial training of the trunk is the same as used with the midwire trellis system, but in this system cordons are trained along the *top* wire of the trellis. Spurs (short canes) are retained on the *lower* sides of the cordons to promote downward growth in American bunch varieties.

The vine must be pruned every year to avoid alternate-year bearing and to make harvesting easier (Figure 6). Pruning mature vines consists of three operations. The first step is pruning last season's growth. In the dormant season, prune back all canes that grew during the previous summer to 4 or 5 inches in length. Leave the remaining spurs at a 6-inch spacing on young vines. As the vines age, they will

develop clusters of spurs. These spurs must be thinned after the third season to force new spur growth. This process also minimizes the labor necessary for cane tying and keeps fruit and renewal regions at a uniform height, facilitating harvesting and pruning. The second step is to remove suckers or shoots growing from the trunk and any damaged arms. A new cane must be trained (from the renewal canes at graft union height) to replace the removed arm. As the third step, remove all tendrils that attach themselves to the trunk *or* fruiting arm of the vine.

Overcropping will greatly reduce fruit quality. Some cluster thinning in years of heavy fruit set (thinning to one cluster per shoot) is the simplest way to ensure that those remaining will develop into larger, more fully ripened clusters. A good rule of thumb for mature vines is to allow no more than two clusters per shoot. Excess clusters should be removed before bloom (early May in the piedmont, late May in the mountains).